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10/662,361	09/16/2003	Fumitaka Goto	00862.023234.	9417

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EXAMINER

DHINGRA, PAWANDEEP

ART UNIT	PAPER NUMBER
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2625

MAIL DATE	DELIVERY MODE
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12/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/662,361

Applicant(s)

GOTO ET AL.

Examiner

Pawandeep S. Dhingra

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- This action is responsive to the following communication: Amendment after non-final rejection filed on 09/28/2007.
- Claim 9 have been cancelled, and new claims 12-16 have been added by the applicant.
- Claims 1-8, and 10-16 are now pending in the present application.

Response to arguments

Applicant's arguments, see pages 8-10, filed 09/28/2007, with respect to the rejection(s) of claim(s) 1-8, and 10-16 under Uekusa et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Tachibana et al.

Drawing Objections

Previous drawing objections to claims are withdrawn in view of applicant's arguments.

Claim Rejections - 35 USC § 112

Previous 112 claim rejections to claims are withdrawn in view of applicant's amendments to the claims.

Claim Rejections - 35 USC § 101

Previous 101 claim rejections to claims are withdrawn in view of applicant's amendments to the claims.

Examiner Notes

Examiner cites particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-11, 13 and 15-16 are rejected under 35 U.S.C. 103 as being unpatentable over Uekusa et al., US 2001/0013953 in view of Tachibana et al., US 5,812,283.

Re claim 1, Uekusa et al. discloses an image processing apparatus (see figure 1) comprising: a corrector, arranged to apply, to image data (see claim 7) stored in a memory area (see fig. 1-4, claim 7 & paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, and input image data are stored in memory), a first correction according to a feature amount of an entire image (see abstract), and a second correction (i.e. color matching) which is different from the first correction (see abstract, figs. 1-4, note that color matching step is performed on the corrected image data and is different from first step of correction image input data); a processor (see figure 2 and claim 7), arranged to apply an image process required to print on a print medium to the image data output from said corrector (see claim 7 and figures 1-3; paragraphs 0031-0037); and a recorder, arranged to print an image on the print medium based on the image data output from said processor (see figures 1-3, 0031-0037, 136-138), wherein said corrector acquires the feature amount from data stored in the memory area before execution of the first correction and before execution of the second correction is completed for the entire image data (see figs. 1-3, claim 7, abstract, and paragraphs 30-37, 83, 130-138).

Uekusa fails to disclose acquiring the feature amount from data stored in the memory area and then releasing the memory area, before execution of image processing is completed for the entire image data.

However, Tachibana et al. teaches acquiring the feature amount from data stored in the memory area and then releasing the memory area, before execution of image processing is completed for the entire image data (see figures 1-3, 6-9, abstract, claim 1, column 1, lines 10-60, column 3, line 55-column 6, line 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by Uekusa to include the memory management (releasing) techniques as taught by Tachibana in order to have an image processing system in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60, and figures 6-9.

Re claim 2, Uekusa et al. further discloses corrector acquires the feature amount from the entire image data or partial data(see abstract) stored in the memory area (see fig. 1-4, claim 7 & paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, and input image data are stored in memory).

Re claim 3, Uekusa et al. further discloses corrector acquires the feature amount from the entire image data or a representative value group of partial data

(see abstract, and figure 12) stored in the memory area (see fig. 1-4, claim 7 & paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, and input image data are stored in memory).

Re claim 5, Uekusa et al. further discloses corrector acquires the feature amount from data appended (i.e. attached) to the image data (see abstract, and figure 8) stored in the memory area (see fig. 1-4, claim 7 & paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, and input image data are stored in memory).

Re claim 6, Uekusa et al. further discloses the data appended to the image data includes at least one of the feature amount and thumbnail image of the image data (see figure 8, and paragraphs 0103-0111).

Re claim 7, Uekusa et al. further discloses the feature amount includes at least one of histograms associated with some colors (see paragraph 0042, and figure 10), information associated with some colors that represents a highlight part (see figure 11, paragraph 0025), information associated with some colors that represents a shadow part (see paragraph 0025), and information associated with hue and saturation in the entire image data or partial data (see paragraphs 0072-0074) stored in the memory area (see fig. 1-4, claim 7 & paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, and input image data are stored in memory).

Regarding claims 8 & 10, they are interpreted and thus rejected for the reasons set forth above in the rejection of claim 1, since claims 8 & 10 disclose a method, and a computer readable medium of instructions for carrying out the method that corresponds to the image processing system of claim 1, thus the method is inherent and it simply provides functionality for the structural implementation found in the image processing system of claim 1.

Re claim 11, Uekusa et al. further discloses a printer (see figure 1) comprising: an interface, arranged to input at least partial image data of a selected image (i.e. input image) from a memory (see figure 1, and steps S10-S90 in figure 2, paragraph 83); and a processor (see figure 1), arranged to perform a first process for performing correction, which is based on the amount of characteristic of the selected image (i.e. input image) expressed by the input image data, on the selected image (see figures 2-3, abstract, and paragraphs 0031-0067, and claim 7), and a second process (i.e. color matching) for performing predetermined processing on the selected image, wherein the amount of the characteristic is extracted from the input image data before the first and second processes are performed on image data (see figs. 1-3; claim 7, abstract, and paragraphs 31-37, 83-84, 130-138, 122, 146).

Uekusa et al. fails to disclose a printer comprising: an interface, arranged to input at least partial image data of a selected image not from a computer but

from a memory card; performing processing on image data in a band or block unit of the selected image using a band or block memory.

However, Tachibana et al. teaches a printer (fig. 1, facsimile) comprising: an interface, arranged to input at least partial image data of a selected image not from a computer but from a memory card (see figures 1-9; column 2, line 20-column 6, line 11); performing processing on image data in a band or block unit of the selected image using a band or block memory (see figures 1-9; abstract, claim 1, column 2, line 20-column 6, line 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by Uekusa to include the memory management (releasing) techniques as taught by Tachibana in order to have an image processing system in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60, and figures 6-9.

Re claim13 (New), Uekusa discloses the amount of the characteristic is acquired using a histogram of the input image data (see abstract, figures 7-10, and paragraphs 107-112)

Re claim 15 (New), Uekusa discloses an operation panel (see figure 1) which receives the selection of image stored in the memory card and a selection of image process to be applied to the selected image (see paragraphs 30-37, 83-86, 130-138, 122, 146).

Re claim 16 (New), Uekusa discloses an inkjet printer (see paragraph 31) comprising: an interface, arranged to input at least partial image data of a selected image (i.e. input image) from a memory (see figure 1, and steps S10-S90 in figure 2, paragraph 83); and a processor (see figure 1), arranged to perform a first process for performing correction, which is based on the amount of characteristic of the selected image (i.e. input image) expressed by the input image data, on the selected image (see figures 2-3, abstract, and paragraphs 0031-0067, and claim 7), and a second process (i.e. color matching) for performing predetermined processing on the selected image, wherein the amount of the characteristic is extracted from the input image data before the first and second processes are performed on image data (see figs. 1-3; claim 7, abstract, and paragraphs 30-37, 83-84, 130-138).

Uekusa et al. fails to disclose a printer comprising: an interface, arranged to input at least partial image data of a selected image not from a computer but from a memory card; and a print head for inkjet printing, arranged to discharge ink from a nozzle in accordance with image data output from said processor; performing processing on image data in a band or block unit of the selected image using a band or block memory.

However, Tachibana et al. teaches an inkjet printer (column 8, line 7) comprising: an interface, arranged to input at least partial image data of a selected image not from a computer but from a memory card (see figures 1-9; column 2, line 20-column 6, line 11); and a print head (i.e. recording head) for inkjet printing, arranged to discharge ink from a nozzle in accordance with image data output from the processor (see column 2, lines 38-41, column 3, lines 16-44); performing processing on image data in a band or block unit of the selected image using a band or block memory (see figures 1-9; abstract, claim 1, column 2, line 20-column 6, line 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by Uekusa to include the memory management (releasing) techniques as taught by Tachibana in order to have an image processing system in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60, and figures 6-9.

3. Claims 12 & 14 are rejected under 35 U.S.C. 103 as being unpatentable over Uekusa et al., US 2001/0013953 in view of Tachibana et al., US 5,812,283 further in view of well known art.

Re claim 12 (New), Uekusa discloses the input image data corresponds to various types of images which can be selected (see paragraph 106-107). It further discloses that Photoshop software is commonly used to perform various kinds of image manipulations in terms of size, etc. (see paragraph 107).

Uekusa fails to explicitly disclose the input image data corresponds to a reduced image of the selected image.

However, Official Notice is taken to note that ability to select and reduce any image is notoriously well known and commonly used in the art. It would have been obvious to have Photoshop software reduce the size of the selected image and include it into various types of images disclosed in fig. 8 of Uekusa, and used the reduced image as the input image data upon selection by application software for the benefit of providing the user with increased flexibility and options.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by Uekusa to include the memory management (releasing) techniques as taught by Tachibana in order to have an image processing system in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60, and figures 6-9.

Re claim 14 (New), Uekusa discloses compressing the image data (see paragraph 138). Uekusa fails to explicitly disclose the selected image has been compressed by the JPEG encoding.

However, Official Notice is taken to note that ability to compress the selected image data by the JPEG encoding is notoriously well known and commonly used in the art. It would have been obvious to compress the selected image data or input image data by JPEG encoding for the benefit of having the storage-effective memory management without losing much image resolution and details.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by Uekusa to include the memory management (releasing) techniques as taught by Tachibana in order to have an image processing system in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60, and figures 6-9.

4. Claim 4 is rejected under 35 U.S.C. 103 as being unpatentable over Uekusa et al., US 2001/0013953 in view of Tachibana et al., US 5,812,283 further in view of Tsuchiya et al., US 6,980,326.

Re claim 4, Uekusa fails to further disclose the representative value group includes at least one of pixel values regularly selected from the image data, pixel values randomly selected from the image data, pixel values of reduced-scale image data of the image data, and DC component values of a plurality of pixels of the image data.

However, Tsuchiya et al. discloses the representative value group includes at least one of pixel values regularly selected from the image data (see figure 5), pixel values randomly selected from the image data (see figure 5, note that any pixel value can be selected as notable pixel, randomly from the set of values), pixel values of reduced-scale image data of the image data (see figure 7), and DC component values of a plurality of pixels of the image data (see figure 3; column 5, lines 22-31, and column 11, line 65 – column 12, line 5, note that the DC component consists of Y, Cr, and Cb data).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by Uekusa to include the memory management (releasing) techniques as taught by Tachibana, and the image correction method as taught by Tsuchiya in order to have an image processing system in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60,

and figures 6-9, and providing "an image process method capable of achieving high-level color noise reduction without deteriorating apparent (or seeming) resolution for a color signal" as taught by Tsuchiya at column 2, lines 47-52.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pawandeep S. Dhingra whose telephone

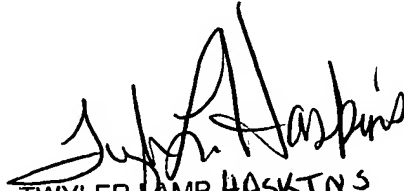
Application/Control Number:
10/662,361
Art Unit: 2625

Page 15

number is 571-270-1231. The examiner can normally be reached on M-F, 9:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on 571-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


TWYLER LAMB HASKINS
SUPERVISOR, PATENT EXAMINER



Pd
December 5, 2007